

(33)

AAAAI and ACAAI Joint Statement Concerning the Use of Powdered and Non-powdered Natural Rubber Latex Gloves

This statement was developed by a joint subcommittee of the American College of Allergy, Asthma and Immunology (ACAAI) and the American Academy of Allergy, Asthma and Immunology (AAAAI). It was approved by the ACAAZ Board of Regents on the recommendation of the Executive Committee on July 21, 1997.

IgE-mediated latex allergy is the result of the exposure of susceptible individuals to latex rubber proteins. Medical devices – principally latex gloves – are the largest single source of exposure to these potent allergens. Exposure to bioavailable allergen may be by direct contact with an **offending device**^{2,3} or by inhalation of allergen carried by **cornstarch powder** with which most powdered gloves are coated.⁴ The clinical manifestations of latex allergy range from mild contact **urticaria** to fatal anaphylaxis.

Allergic sensitization to constituent latex rubber proteins is linked to exposure to latex allergens in the vast majority of cases. Direct exposure to latex allergens results from either contact exposures to medical devices and latex **gloves**^{2,3} or from respiratory exposure to latex **aeroallergen** carried by donning glove **powders**.^{4,5}

Latex occupational asthma may result from inhalation of latex rubber proteins carried on glove powder from latex **gloves**.⁶ Asthma caused by occupational exposure may continue and lead to persistent impairment, and rarely, to disability.⁷

These risks – of acute allergic reactions and of occupational asthma – can be reduced only by curtailing expo-

sure to latex rubber **proteins**.^{10,11} We recommend that the following steps, which utilize currently available devices, be taken to reduce these risks:

- Latex gloves should be used only as mandated by accepted Universal Precautions standards. The routine use of latex gloves by food handlers, housekeeping, **transport** and medical personnel in low risk situations (e.g. food handling, bed transport, routine physical examination) should be discouraged
- Only low-allergen latex gloves should be purchased and used. This will reduce the occurrence of reactions among sensitized personnel and should reduce the rate of **sensitization**.¹²⁻¹⁴
- Only powder-free latex gloves should be purchased and used. This will reduce latex rubber aeroallergen levels and **exposure**.¹⁵⁻¹⁷

ACAAI American College
of Allergy, Asthma
& Immunology

References

1. Slater J. Latex Allergy. J Allergy Clin Immunol 1994;94:139-49.
2. Charous B, Hamilton R, Yunginger J. Occupational latex exposure: characteristics of contact and systemic reactions in 47 workers. J Allergy Clin Immunol 1994;94(1):12-18.
3. Sussman G, Beezhold D. Allergy to latex rubber. Ann Int Med 1995;122(1):43-46.
4. Beezhold D, Beck W. Surgical glove powders bind latex antigens. Archives of Surgery 1992;127:1354-57.
5. Tomazic V, Shampaine E, Lamanna A, et al. Cornstarch powder on latex products is an allergen carrier. J Allergy Clin Immunol 1994;93(4):751-8.
6. Swanson M, Bubak M, Hunt L, et al. Quantification of occupational latex aeroallergens in a medical center. J Allergy Clin Immunol 1994;94:445-551.
7. Swanson M, Yunginger J, Reed C. Immunochemical quantification of airborne natural rubber allergens in medical and dental office building. In: Maroni M, ed. Ventilation and indoor air quality in hospitals. 1996:257-62.
8. Heilman D, Jones R, Swanson M, et al. A prospective, controlled study showing that rubber gloves are the major contributor to latex aeroallergen levels in the operating room. J Allergy Clin Immunol 1996;98:325-30.
9. Paggiaro P, Vagaggini B, Bacci E, et al. Prognosis of occupational asthma. Eur Respir J 1994;7:761-67.
10. Charous B, Banov C, Bardana EJ, et al. Latex allergy – an emerging healthcare problem. Ann Allergy Asthma Immunol 1995;75:19-21.
11. Kelly K, Sussman G, Fink J. Stop the sensitization. J Allergy Clin Immunol 1996;98:857-858.
12. Jones R, Scheppmann D, Heilman D, et al. Prospective study of extractable latex allergen contents of disposable medical gloves. Ann Allergy 1994;73(4):321-25.
13. Patterson P. Allergy issues complicate buying decisions for gloves. OR Manager 1995;11(6).
14. Yunginger J, Jones R, Fransway A, et al. Extractable latex allergens and proteins in disposable medical gloves and other rubber products. J Allergy Clin Immunol 1994;93:836-42.
15. Tarlo S, Sussman G, Contala A, et al. Control of airborne latex by use of powder-free gloves. J Allergy Clin Immunol 1994;93:985-9.
16. Vandenplas O, Delwiche J-P, Depelchin S, et al. Latex gloves with a lower protein content reduce bronchial reactions in subjects with occupational asthma ad by latex. Am J Respir Crit Care Med 1995;151:887-891.
17. Siu S, Smith G, Sussman G, et al. Reduction of airborne latex protein exposure by use of low protein, powder-free gloves. J Allergy Clin Immunol 1996;97:325.